

REMARKS

Reconsideration of the instant application is respectfully requested. The present submission is responsive to the Office Action of March 23, 2005, in which claims 1-23 are presently pending. Each of the pending claims has been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,492,220 to Ikeda. For the following reasons, however, it is respectfully submitted that the application is in condition for allowance.

Independent claims 1, 10 and 18 have been amended as more specifically indicated above to point out that the implantation of boron is implemented in a manner that is selective to the insulative material (e.g., with the hardmask still in place) so as to prevent the boron from being implanted into active device areas. Support for this amendment may be found at least in paragraphs [0015] and [0018] of the electronically filed specification, as well as in Figure 6 of the present application.

In contrast, the boron implantation step as taught in Ikeda is carried out as part of the active device formation and, more significantly, with the hardmask (used to define the trench isolation areas) first being removed. Thus, in contrast to the presently claimed invention, Ikeda does not teach selectively implanting the boron into the insulative material in a self-aligned manner, nor does Ikeda teach the implantation with a hardmask still protecting the active device areas.

Once the shallow trenches 5 of Ikeda are filled with insulative material 6 (e.g., Figure 4D), the hardmask 2 and 3 is then removed (see Figure 4E) before the boron implantation step (Figure 4F). Thus, the boron is actually implanted into both the isolation regions 6 and the active areas of the substrate 1. Therefore, each of the claims as presently amended have overcome the Examiner's §102 rejections.

For the above stated reasons, it is respectfully submitted that the present application is now in condition for allowance. No new matter has been entered and no additional fees are believed to be required. However, if any fees are due with respect to this Amendment, please charge them to Deposit Account No. 06-1130 maintained by Applicant's attorneys.

Respectfully submitted,
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